
Report Generation

The Call Accounting reports provide information on the details of the call records which were collected from the Meridian 1. They also include information on your system databases and configurations. Each report appears in the Reports drop-down menu under its specific cascading menu.

To set up and run your reports, first select your output device and then select your reporting filters (or parameters). Each report begins with a banner page indicating the reporting filters for that report. Keep this information attached to the report for reference purposes.

The following paragraphs describe the common options which are presented before running a report.

Sort Order: This option allows you to select the order in which the directories are first sorted. By sorting this file in the appropriate order, the system organizes the report data in a way that best suits your needs.

Initialize Summary File: This option allows you to reset or clear the Summary file. This is necessary when the system generates a new set of results. Turn the **Initialize summary file** check box on (X) if changes were made to the report filters since the Summary file was first created.

Produce Summary Data: This option causes the system to save the extension detail totals in the Summary file. The system then uses this file in the production of other reports. If you run the report again using different filters, you should regenerate this file to ensure that the extension totals are consistent with the newly selected data. However, you may decide not to initialize the Summary file if the new totals are to be added to the existing summary data.

Schedule: This command button invokes the MAT Common Services Scheduler module to generate reports.

When you schedule a report to run using the MAT Scheduler, Call Accounting will create the following command lines based on the type of report being generated. These command lines indicate that the output will be sent to the configured printer based on the type of report being generated.

Type of Report	Command Line
CDR Data Collection Report	OUTPUT:P or OUTPUT:LST
Detail, Summary, or Configuration Reports	OUTPUT:P

Select Report Filters

Call Accounting allows you to generate reports based on data which meets a variety of report criteria. If you do not set report filters, the reports will include all the CDR data in the Call Database (e.g., every department instead of a particular one).

To access the Select Report Filters dialog, click on **Select Report Filters** from the Reports drop-down menu. A dialog will appear containing a list of filter command buttons for this particular site. The name of this file will appear next to the line **Select File**. The default filename for this filter will be SELECT1.DAT. When you exit this file, the system will assign the default filter name to this site. If you wish to save this file to a different filename, click on the **Save As** command button. A Report Filters dialog will appear prompting you to enter the new filename. Once you have entered the new filename, click on the **OK** command button to save it.

To select a filter, click on the command button for that filter (e.g., Date, Time, Department). Another edit box will appear prompting you to enter its filter ranges. Enter the minimum and maximum values in the filter fields. These values are inclusive. To save the filter ranges and return to the Select Report Filters dialog, click on the **OK** command button. You will find that the **Include** check box for this item will be turned on (X). To exclude this range from the reports, click on the **Exclude** check box. When you run the reports, these filters will only include (or exclude) the data within the ranges you have set.

Figure 9
Select Report Filters dialog

Include		Exclude		Include		Exclude	
Date	☒		☐	Department	☒		☐
Time	☐		☒	Division	☐		☐
Outgoing Ext	☐		☐	Auth. Code	☐		☐
Incoming Ext	☐		☐	Account Code	☐		☐
Outgoing Trk	☐		☐	Access Code	☐		☐
Incoming Trk	☐		☐	Duration	☐		☐
Trk Group Dates	☐		☐	Ring Time	☐		☐
Cost	☐		☐	Meter Pulse	☐		☐
Digits	☐		☐				

Open Save As Close Help

When you specify more than one filter, the system will run reports which include data within the ranges for all the filters. For example, if you set the Date filter to include every record for December (12/01 to 12/31) and set the Time filter for times after 6:00 pm (18:00 to 24:00), the reports will only include data collected every day in December after 6:00 pm.

Note: Call Accounting will accept European date formats if your PC has been configured to do so. To verify the system settings, access the International icon of the Control Panel. In the Date section, click on Change and verify that the Short Date Format is **DMY**.

If you wish to delete a range, blank out the fields by using the delete key. To select a single value for fields within the ranges, enter the same minimum and maximum values in that range.

The following paragraphs describe the different fields and their ranges (values).

Date: In these fields, select up to five date ranges (mm/dd) for your reports. The reports will include (or exclude) only the data for call records which have dates within these ranges.

You can also enter ranges for dates relative to the current date. These values represent the number of days and months relative to the current PC based date. This is useful if you are generating reports at regularly scheduled intervals for set date ranges (e.g., previous month) and you do not wish to reset the date report filters for each report generation.

To define relative ranges for the filters, enter a value from -9/-9 to 00/00 in the minimum and maximum range fields. For example, if you wish to include call record information for the previous week, enter: **00/-7** and **00/00** in the minimum and maximum fields.

Note: You can combine relative range values with actual dates. For example, if the current date is June 1 and you enter a range of -1/00 to 05/15, the system will include or exclude records with dates from May 1 to May 15.

Time: In this dialog, select up to five time periods in the form 'hh:mm' (24 hour format). Enter the minimum and maximum time ranges in these fields. You can use specific dates in conjunction with this field to provide data on very narrowly defined time periods.

Outgoing Ext.: Enter up to 15 ranges of extensions in these fields for reporting purposes. This dialog applies to outgoing calls only (i.e., Detail and Summary reports).

Incoming Ext.: In this dialog, enter up to 15 ranges of extensions for reporting purposes. These ranges apply only to incoming calls and only apply to Trunk Analysis Reports.

Outgoing Trk: Enter up to 15 ranges of outgoing trunks in these fields for trunk usage study purposes.

Incoming Trk: In these fields, enter up to 15 ranges of incoming trunks for trunk usage study purposes.

Trk Group Dates: In these fields, enter the trunk group billing dates. This is useful since trunk group billing dates are not always the same as the billing dates for regular telephone services.

Cost: Enter a minimum and maximum cost for which reporting is to be performed. Only calls with a cost in this range will be reported.

Digits: Enter up to ten different call digit patterns to filter which calls appear on the reports. You can delete leading digits such as trunk access codes (i.e., 8, 9) or dialing access codes (i.e., 00) that are not used for costing purposes. As well, you can use the wildcard characters ? and * to enter digit patterns for multiple entries. The question mark (?) is a wildcard place holder for a single character, while the asterisk (*) is a wildcard place holder for multiple characters. The following examples demonstrate the use of these wildcards.

Table 2
Digit display examples

Digits	Description
901*	Causes only international calls to be printed
815??????	Causes calls with access code 81 and starting with the digit 5 to be printed
915?4*	Prints all calls in area codes 504 and 514
—end—	

Note: If you use this feature and the system generates cumulative summaries, then you must ensure that the data selected in successive reports which add to the Summary file are compatible with the data already there.

Department: Enter up to five different departments in these fields. To distinguish between the minimum and maximum criteria, list the departments in alphabetical order (i.e., Min-Accounting; Max-Sales).

Division: Enter up to five different divisions in these fields. To distinguish between the minimum and maximum criteria, list the divisions in alphabetical order.

Auth. Code: Enter up to ten different authorization codes in these fields.

Account Code: Enter up to eight ranges of account codes in these fields. This is useful for generating Account Code Reports and summaries on specific ranges that may correspond to industry or market groups.

Note: The Authorization Code and Account Code fields are digit sensitive. For example, **0001 0999** is not the same as **001 999**.

Access Code: Select up to ten discrete access code patterns (up to ten characters in length) that are to be used for reporting. This is very useful in special service reporting. Enter patterns of digits to identify the range of access codes (similar to the filters entered in the Digits dialog). The same effect can be achieved by specifying a number of outgoing trunks.

Duration: In the fields of this dialog, enter a minimum and maximum duration in the form 'hh:mm:ss' for which reporting is to be performed. Only call records with a duration within this range will be used.

Ring Time: In the fields of this dialog, enter the minimum and maximum ranges for the recorded ring times (the number of elapsed seconds before an incoming call is answered).

Meter Pulse: In the fields of this dialog, enter the minimum and maximum ranges for recorded meter pulses (the number of pulses received from the central office).

Note 1: These filters are based on the actual data. If filters are used, then the system will not take into account any Call Digit Translation that may exist.

Note 2: This function relies on a standard format of CDR records for its filters. Since the Other Billable Items database can contain calling information with varying formats, you cannot use the Select Report Filters function to set a range of Other Billable Item records for reporting.

Once you have selected the various filters for this site, click on the **Close** command button. The system will prompt you to save these edits. Click on the **Yes** command button to do so and exit to the main window.

Cost Allocation reports

The following reports provide costing details and summaries for the calls collected from the Meridian 1. These include accumulated summary reports based on department, division, or corporate totals. To access these reports, select Cost Allocation from the Reports drop-down menu and then select the appropriate report from its cascading menu.

Schedule: If you wish to schedule each of these reports to run at a specific date and time, click on the **Schedule** command button from their respective report setup dialogs. This will invoke the MAT Common Services Scheduler application in which you can select the date and time for later reporting. Scheduler will then generate the selected report at the predefined date and time.

Exception/Chronological Report

The Exception/Chronological Report contains calls placed in the order in which they are found in the Call Database (generally in chronological order). You can use this report to isolate calling line activity from a specific period of time.

To run this report, select **Exception/Chronological Report** from the Cost Allocation cascading menu. The Exception/Chronological Report dialog will appear containing the check box **Recalculate line usage for report**. Turn this check box on (X) if you wish to recalculate the line usage. To print the report to the output device click on the **OK** command button.

Note: Any calls that have *I next to them represent all incoming calls that have a calling line ID assigned to it.

Table 3
Exception/Chronological Report

Acme Limited Dallas, TX									
Exception/Chronological Report									
Page: 1 Date: 11/21/95									
Ext	Digits Dialed	Location	Date	Time	Duration	Cost	Route Used	Comments	
284	92146551111		11/17	13:34	1:06	0.00			
284	92146552222		11/17	13:35	0:38	0.00			
106	106	Incoming	11/17	13:29	9:28	0.00			
284	92146553333		11/17	13:37	1:20	0.00			
210	91514		11/17	13:38	0:06	0.00		Plant A	
203	203	Incoming	11/17	13:30	9:30	0.00		Plant B	
230	9210		11/17	13:42	0:20	0.00		Fd Off.	
212	212	Incoming	11/17	13:42	0:20	0.00			
241	241	Incoming	11/17	13:51	0:32	0.00			
1	98259826		11/17	13:52	0:24	0.00			
241	241	Incoming	11/17	13:53	1:18	0.00			
245	914165551111		11/17	14:06	0:12	0.00			
245	92145551222		11/17	14:07	0:08	0.00		Supplies	
277	277	Incoming	11/17	14:05	1:56	0.00		Supplies	
245	92145554444		11/17	14:07	1:02	0.00		Supplies	
226	917135552678		11/17	13:55	14:30	0.00			
207	917055556242		11/17	13:52	18:14	0.00		4	
229	95553238		11/17	14:20	2:54	0.00			
228	228	Incoming	11/17	14:12	12:30	0.00			
216	216	Incoming	11/17	14:22	1:36	0.00			
224	224	Incoming	11/17	14:18	6:30	0.00			
1	914035551212		11/17	14:23	0:48	0.00		4	
Report Totals:									
# Calls		Minutes		Min/Call		Cost		Cost/Call	
In	Out	In	Out	In	Out	In	Out	In	Out
Total:		0	0	0:00	0:00	0:00	0:00	0.00	0.00
Reviewed By: _____ Approved By: _____									

Extension Detail Report

The Extension Detail Report is the largest and most informative of all the reports. It provides details for the individual calls as collected by the buffer unit with the exception of account code calls. To include account code calls in the Extension Detail Report, enable the **Include Account Calls** check box from the Reporting Options function.

To run this report, select **Extension Detail** from the Cost Allocation cascading menu. The Extension Detail Sort dialog will appear prompting you to enter up to five sorting options for this report. This sorting order does not affect the Summary file. If you require the summary reports, turn on (X) the **Initialize summary file** and **Produce summary file** check boxes.

In general, you should generate the Summary file whenever the select filters will include data not previously processed. If the selected filters cause data which have previously been processed to be included in the Summary file, then that data will be recorded twice in later reports, thereby reducing their usefulness.

Each extension begins a new page, and each page of the report contains a page number, the date, and information from the Billing Database identifying the user of the extension.

The detail lines of this report consist of a number of columns which are described in the following paragraphs:

Digits Dialed: This field provides formatted output of the phone number dialed.

Note: The digits may not reflect the digits actually output in the system's CDR records when automatic call routing is used.

Location: This is the city and province/state that was called. If this information is not available, then the country is usually specified. Incoming will be printed for outgoing calls and the name of the destination location, if defined, in location books for the trunks. If a destination location cannot be found, the field will be left empty.

Date: This field contains the date in the format 'mm/dd' on which the call was placed.

Time: This contains the time in 24 hour format (hh:mm) when the call was placed.

Duration: This field contains the length of the call in minutes and seconds.

Cost: This field lists the cost of the call in dollars and cents.

Route Used: This field contains the actual route used to place the call. This field's contents are derived from the Configuration file (CONFIG1.DAT) and the information is taken from the Route DES in the Call Reporting Options in the Trunk Group Service Definition window.

Comments: This field will contain comments based on the services used (e.g., Directory Asst.). This information is defined by the call type as defined in the Trunk Group Service Definition or if the digits dialed match a telephone number defined in the Customer Directory. If no call type or no customer database telephone number is matched, then this field will remain empty.

Table 4
Extension Detail Report

Acme Limited Dallas, TX										
Extension Detail Report										
Extension: 216 - Smith, J.								Page: 1		
Department: MARKETING								Date: 05/18/95		
Division: SALES										

Digits Dialed	Location		Date	Time	Duration	Cost	Route Used	Comments		

9 1 214 555-5692	DALLAS	TX	05/17	11:16	45:00	23.29	DDD	TTL INC.		
9 1 713 555-5777	HOUSTON	TX	05/17	11:31	12:00	4.42	DDD			
9 1 214 665-5430	HOUSTON	TX	05/17	11:37	7:00	2.58	DDD			
9 1 214 555-2837	HOUSTON	TX	05/17	11:37	16:00	9.02	DDD			
9 1 713 555-9275	DALLAS	TX	05/17	11:40	1:00	0.39	DDD			
9 1 214 555-5111	DALLAS	TX	05/17	11:42	2:00	0.74	DDD			
9 1 212 555-6419	NEW YORK	NY	05/17	11:43	1:00	0.39	DDD			
9 1 212 555-0211	NEW YORK	NY	05/17	11:43	33:00	18.60	DDD			
9 1 212 555-9275	NEW YORK	NY	05/17	11:44	1:00	0.39	DDD			
9 1 713 555-5347	HOUSTON	TX	05/17	11:46	1:00	0.39	DDD			
9 1 719 555-1000	PUEBLO	CO	05/17	11:47	15:00	8.45	DDD			

Report Totals:		# Calls		Minutes		Min/Call		Cost		Cost/Call
	In	Out	In	Out	In	Out	In	Out	In	Out
DDD	0	11	0:00	134:00	0:00	12:11	0.00	68.64	0.00	6.24

Total:	0	11	0:00	134:00	0:00	12:11	0.00	68.64	0.00	6.24

Reviewed By: _____ Approved By: _____										

Department Summary Report

The Department Summary Report provides a summary of the telephone usage by extension within departments. The report is listed in alphabetic order by division and department. Within each department, the extensions appear in increasing numeric order.

The usage is provided by facility, including total number of calls and total duration. The facility names are determined from the Billing Database and are therefore customized by site number.

Call Accounting also provides the sums for each employee that incurs a cost, including the total number of calls, total minutes, total cost, and total equipment.

To run the Department Summary Report, select **Department Summary** from the Cost Allocation cascading menu. The system will prompt you with a dialog containing an **Initialize summary file** check box. Turn it on (X) if you wish to initialize the Summary file. Click on the **OK** command button to send the report to your output device.

Table 5
Department Summary Report

Acme Limited Dallas, TX Department Summary Report					
Division: SALES			Page: 1		
Department: MARKETING			Date: 05/18/95		
Ext. /Employee	Facility Costs DDD	Total Calls	Total Minutes	Total Cost	Equip
207	1.13	1	2:00	1.13	0.00
211	4.05	2	11:00	4.05	0.00
214	1.69	1	3:00	1.69	0.00
215	3.17	1	12:00	3.17	0.00
216	23.29	1	45:00	23.29	0.00
225	0.39	1	1:00	0.39	0.00
243	0.74	1	2:00	0.74	0.00
283	9.02	1	16:00	9.02	0.00
288	4.42	1	12:00	4.42	0.00
Totals	84.78	22	173:00	84.78	0.00
Averages	6.06		12:21	6.06	0.00
Reviewed By: _____ Approved By: _____					

Division Summary Report

The Division Summary Report provides a summary of the telephone usage by departments within divisions. The report is listed in alphabetic order by division and departments.

The usage is provided by facility and includes total calls and total duration. The system determines the facility names through the Billing Database. The names are customized by site number.

The system also provides sums for each department that incurs a cost. It provides the total number of calls, total minutes, total cost, and total equipment.

To generate the Division Summary Report, select **Division Summary** from the Cost Allocation cascading menu. The Division Summary Report dialog will appear containing the **Initialize summary file** check box. Turn this check box on (X) if you wish to initialize the Summary file. To run the report and send it to the output device, click on the **OK** command button.

Table 6
Division Summary Report

Acme Limited Dallas, TX Division Summary Report Division: SALES Page: 1 Date: 05/18/95					
Department	Facility Costs DDD	Total Calls	Total Minutes	Total Cost	Equip
ACCT	15.12	3	31:00	15.12	0.00
ADV	1.13	2	3:00	1.13	0.00
MANUF	5.18	3	13:00	5.18	0.00
MARKETING	63.35	14	126:00	63.35	0.00
Totals	84.78	22	173:00	84.78	0.00
Averages	21.19		43:15	21.19	0.00
Reviewed By: _____ Approved By: _____					

Corporate Summary Report

The Corporate Summary Report provides a summary of the telephone usage by division within the corporation. The report is listed in alphabetic order by division.

The usage is provided by facility, including total calls and total duration. The system determines the facility names through the Billing Database and are customized by site number.

The program also provides sums for each division that incurs a cost, thus providing the total number of calls, total minutes, total cost, and total equipment.

To generate this report, select **Corporate Summary** from the Cost Allocation cascading menu. The Corporate Summary Report dialog will appear containing the **Initialize summary file** check box. Turn this check box on (X) to initialize the Summary file. To send this report to the output device, click on the **OK** command button.

Table 7
Corporate Summary Report

Acme Limited Dallas, TX Corporate Summary Report Page: 1 Date: 05/18/95					
Division	Facility Costs DDD	Total Calls	Total Minutes	Total Cost	Equip
ACCT	14.56	4	31:00	14.56	0.00
ADV	28.15	3	60:00	28.15	0.00
SALES	42.07	15	82:00	42.07	0.00
Totals	84.78	22	173:00	84.78	0.00
Averages	28.26		57:40	28.26	0.00
Reviewed By: _____ Approved By: _____					

Account Code Report

The Account Code Report provides details on client interaction with employees. Calls with account codes do not appear on the Extension Detail Report unless you specify them through the Reporting Options function. Therefore, you must generate the Account Code Report to display these calls. Each customer begins a new page, and each page contains the date and page number as well as the customer's name, location, and account code.

To generate this report, select **Account Code** from the Cost Allocation cascading menu. The Account Code Report dialog will appear containing the **Initialize summary file** and **Produce summary file** check boxes. In general, you should initialize and produce the Summary file whenever you modify the Select Report Filters dialog. To generate the Account Code Report, click on the **OK** command button.

The following paragraphs describe the individual fields for the Account Code Report detail lines.

Ext.: This column lists the extension of the employee making the call.

Employee: This lists the name of the employee assigned to this extension. This information is derived from the Billing Database.

Department: This field contains the department where the employee is located.

Digits Dialed: This field provides formatted output of the phone number dialed.

Note: The digits may not reflect the digits actually output by the system in its CDR records when automatic call routing is used.

Location: This is the city and province/state that was called. If this information is not available, then the country is usually specified.

Date: This contains the date in the format 'mm/dd' on which the call was placed.

Time: This lists the time when the call was placed in a 24 hour format (hh:mm).

Duration: This contains the length of the call in minutes and seconds.

Cost: This field lists the cost of the call in dollars and cents.

Route Used: This field contains the actual route used to place the call. The contents of this field derive from the Configuration file (CONFIG1.DAT).

The report lists a short summary of the call activity at the end of each client's detail list.

Table 8
Account Code Report

Acme Limited Dallas, Texas Account Code Report										
Client/Project: Unassigned							Page: 1			
Acct: 00416							Date: 05/18/95			
Ext.	Employee	Department	Digits Dialed			Location	Date	Time	Duration	Cost Route Used
203	SMYTHE	753	CLIENT	SERVICES	83 613 555 0095	HOUSTON	TX 09/13	12:13	0:36	0.13 WT3
203	SMYTHE	753	CLIENT	SERVICES	83 613 555 0095	HOUSTON	TX 09/15	16:01	0:06	0.02 WT3
203	SMYTHE	753	CLIENT	SERVICES	83 613 555 0095	HOUSTON	TX 09/15	16:04	0:54	0.19 WT3
203	SMYTHE	753	CLIENT	SERVICES	83 613 555 0095	HOUSTON	TX 09/19	09:12	2:00	0.43 WT3
203	SMYTHE	753	CLIENT	SERVICES	83 613 555 0095	HOUSTON	TX 09/20	16:04	1:24	0.30 WT3
1	SWITCHBOARD	500	CUSTOMER	SERVICE	9 0 555 2138	DALLAS	TX 09/23	13:29	3:56	0.00 DDD
205	JOHNSTONE, M	620	CUSTOMER	ACCTS	82 212 555 6660	NEW YORK	NY 09/29	13:14	1:18	0.24 WT2
205	JOHNSTONE, M	620	CUSTOMER	ACCTS	82 212 555 6660	NEW YORK	NY 10/07	14:37	0:48	0.15 WT2
1	SWITCHBOARD	500	CUSTOMER	SERVICE	9 1 203 555 6374	STAMFORD	CT 11/03	13:58	5:00	2.72 DDD
1	SWITCHBOARD	500	CUSTOMER	SERVICE	9 1 203 555 7088	STAMFORD	CT 11/03	14:07	1:00	0.54 DDD
1	SWITCHBOARD	500	CUSTOMER	SERVICE	9 1 203 555 6374	STAMFORD	CT 11/03	14:10	3:00	1.63 DDD
1	SWITCHBOARD	500	CUSTOMER	SERVICE	9 0 555 2138	DALLAS	TX 11/03	14:54	9:04	0.00 DDD

Account Totals:		# Calls	Minutes			Min/Call		Cost		Cost/Call
ZONE 2		2	2:06			1:03		0.39		0.19
ZONE 3		6	10:06			1:41		2.16		0.36
ZONE 6		0	0:00			0:00		0.00		0.00
DDD		7	27:36			3:57		5.43		0.78
TIE FX		0	0:00			0:00		0.00		0.00
Total: 15		39:48	2:39			7.98		0.53		

Reviewed By: _____ Approved By: _____										

Account Code Summary Report

The Account Code Summary Report provides total usage and costing statistics for each client/account code. The report is organized by ascending order of account code.

The usage is reported by facility. The system also provides total call volumes, duration, and costs by account code. The summary lines contain the totals by each facility and their averages.

To generate this report, select **Cost Allocation** from the Reports drop-down menu and select **Account Code Summary**. The Account Code Summary Report dialog will appear containing the **Initialize summary file** check box. Click on the **OK** command button to generate this report.

Table 9
Account Code Summary Report

Acme Limited Dallas, TX Account Code Summary Report						Page: 1	Date: 05/18/95	Period: May 18 - May 18
CLIENT/PROJECT	ZONE 2	ZONE 3	ZONE 6	DDD	TIE FX	TOTAL CALL	TOTAL DUR.	TOTAL COST
0555	0.00	0.00	0.00	0.93	0.00	1	2:00	0.93
D0416 PROJECT X	0.39	2.16	0.00	5.43	0.00	15	39:48	7.98
00555 PROJECT ASSIMILATE	0.62	0.00	3.23	16.20	0.00	12	48:06	20.05
01234 PROJECT SMILE	0.29	0.00	1.66	0.00	0.00	12	11:42	1.95
09999 PROJECT DROP KICK	0.95	0.87	3.15	7.06	0.00	19	64:42	12.03
001234	0.11	0.00	0.00	0.00	0.00	1	0:36	0.11
TOTALS	2.36	3.03	8.04	29.62	0.00	60	166:54	43.05
AVERAGES	0.21	0.38	0.89	2.96	0.00	12	33:23	8.61
Reviewed By: _____						Approved By: _____		

Account Code Summary by Extension Report

The Account Code Summary by Extension Report provides total usage and costing statistics for each client/account code call for each extension.

The report is organized by ascending order of account code. The usage is reported by facility. The system also provides total call volumes, duration, and costs by account code.

Each extension begins a new page, and each page of the report contains a page number, the date, and information from the Billing Database identifying the user of the extension.

To generate this report, select **Cost Allocation** from the Reports drop-down menu and select **Account Code Summary by Extension**. The Account Code Summary by Extension Report dialog will appear prompting you to enter up to five sorting options for this report. This sorting order does not affect the Summary file. If you require the summary reports, turn on (X) the **Initialize summary file** and **Produce summary file** check boxes. Click on the **OK** command button to generate this report.

Table 10
Account Code Summary by Extension Report

Acme Ltd.					
Dallas, TX					
Account Code Summary by Extension					
Extension: 201 - JAMES, D.				Page: 1	
Department: RD				Date: 05/31/95	
Division: RD					

Client/Project:		Facility Costs	Total	Total	Total
		DDD	Calls	Duration	Cost

400	IBM	15.02	2	35:23	15.02
500	ITT	13.35	1	32:00	13.35
600	IGT	6.55	2	111:05	6.55

Totals		34.92	5	178:28	34.92
Averages		11.64	1	59:29	11.64

Tax included in costs:					
TAX		:	1.95		
Reviewed By: _____ Approved By: _____					

Undisbursed Verification Report

This report lists outgoing calls that do not have account codes assigned to them. Once you print this report, you can use it as a reference to assign account codes to these calls using the Account Code Editor. To generate this report, select **Undisbursed Verification** from the Cost Allocation cascading menu. Its dialog will appear prompting you to specify the sorting priority. You also have the option of initializing and producing the Summary file. Once you have selected your options, click on the **OK** command button to send this report to the output device.

Table 11
Undisbursed Verification Report

Acme Limited Dallas, TX										
Undisbursed Verification										
Extension: 2010 - CENTER, MESSAGE								Page: 1		
Department: ADMINISTRATION								Date: 05/18/95		
Division:										
Digits Dialed	Location	Date	Time	Duration	Cost	Route Used	Cl'nt/Proj.	Acc't Code		
9 1 212 555-8215	NEW YORK NY	07/06	10:16	6:00	3.52	DDD				
9 1 813 555-0272	TAMPA FL	07/06	10:26	6:00	3.17	DDD				
9 555-3310	DALLAS TX	07/06	12:35	3:00	1.07	DDD				
9 555-3333	DALLAS TX	07/06	12:37	2:00	0.71	DDD				
9 1 312 555-5791	CHICAGO IL	07/06	15:33	1:00	0.53	DDD				
9 1 514 555-0593	MONTREAL PQ	07/06	15:45	26:00	11.66	DDD				
9 555-3333	DALLAS TX	07/06	16:15	1:00	0.39	DDD				
9 1 212 555-2122	NEW YORK NY	07/11	16:12	4:00	1.75	DDD				
9 1 212 555-0100	NEW YORK NY	07/12	13:57	6:00	2.55	DDD				
9 1 619 555-9500	CARLSBAD CA	07/12	14:38	4:00	2.58	DDD				
9 1 312 555-7136	CHICAGO IL	07/12	15:04	4:00	1.66	DDD				
9 1 514 555-0593	MONTREAL PQ	07/12	15:10	6:00	2.69	DDD				
9 1 212 555-4124	NEW YORK NY	07/12	15:16	6:00	2.69	DDD				
9 1 212 555-4124	NEW YORK NY	07/13	11:34	1:00	0.45	DDD				
9 1 212 555-4124	NEW YORK NY	07/13	15:43	7:00	3.14	DDD				
9 1 813 555-5699	TAMPAL FL	07/13	15:53	2:00	1.06	DDD				
9 411		07/13	16:17	2:00	0.69	DDD				
9 1 312 555-0593	CHICAGO IL	07/14	11:35	17:00	7.62	DDD				
9 1 312 555-7136	CHICAGO IL	07/14	14:11	2:00	0.83	DDD				
9 1 208 555-2021	BOISE ID	07/17	09:35	1:00	0.35	DDD				
9 1 206 555-0272	SEATTLE WA	07/17	09:36	2:00	0.69	DDD				
9 1 206 555-5500	SEATTLE WA	07/17	09:37	2:00	0.69	DDD				
9 555-1540	DALLAS TX	07/17	13:02	2:00	0.39	DDD				
9 1 555-0988	DALLAS TX	07/17	14:09	6:00	0.97	DDD				
9 1 613 555-7136	HOUSTON TX	07/17	17:07	3:00	0.50	DDD				
9 1 613 555-6156	HOUSTON TX	07/18	14:17	3:00	1.59	DDD				
Report Totals:										
	# Calls	Minutes		Min/Call		Cost		Cost/Call		
	In Out	In Out	In Out	In Out	In Out	In Out	In Out	In Out		
DDD	0 26	0:00 125:00	0:00 4:42	0.00 53.94	0.00 2.07					
LOCAL	0 0	0:00 0:00	0:00 0:00	0.00 0.00	0.00 0.00					
Total:	0 26	0:00 125:00	0:00 4:42	0.00 53.94	0.00 2.07					
Tax included in costs:										
TAX	8.09									
Reviewed By: _____ Approved By: _____										

Undisbursed Summary Report

The Undisbursed Summary Report lists a summary of the information in the Undisbursed Verification Report (i.e., outgoing calls that do not have account codes assigned to them).

To generate this report, select **Undisbursed Summary** from the Cost Allocation cascading menu. Its dialog will appear with the **Initialize summary file** check box. Turn this check box on (X) to initialize the Summary file for this report. Click on the **OK** command button to send this report to the output device.

Table 12
Undisbursed Summary Report

Acme Limited Dallas, TX Undisbursed Summary						
Division:			Page: 1			
Department: SALES			Date: 05/18/95			
Ext/Employee	Facility Costs DDD	LOCAL	Total Calls	Total Minutes	Total Cost	Equip
2040 NURGENT, JAN	275.05	0.00	270	775:00	275.05	86.41
2070 DOVER, ILENE	751.40	0.00	275	1925:00	751.40	85.91
2090 LILLIPUT, LILLIAN	0.00	0.00	0	0:00	0.00	85.41
4010 YEHAZ, FRED	525.20	0.00	260	1520:00	525.20	86.66
5000 CLOSETTE, ROXANNE	0.00	0.00	0	0:00	0.00	86.66
Totals	1551.65	0.00	805	4220:00	1551.65	431.05
Averages	310.33	0.00		844:00	310.33	86.21
Tax included in costs:						
TAX : 202.37						
Reviewed By: _____ Approved By: _____						

Authorization Code Report

The Authorization Code Report is provided for those organizations who use the authorization code feature on their Meridian 1. This feature allows a user to place calls from any phone and still be able to track who placed the call.

The Authorization Code Report lists calls made by every extension based on their corresponding authorization code. It uses the Billing Database as a key for which authorization code belongs to which extension. Call Accounting never prints your authorization code; it only prints the extension. The format of this report is identical to that of the Extension Detail Report. The comments column will contain the extension from which the call was placed.

The Authorization Code Report will produce summary data so that the Department, Division, and Corporate Summary Reports may be run. In these reports, the calls for each extension represent calls placed from extensions which had no authorization code.

To generate this report, select **Authorization Code** from the Cost Allocation cascading menu. Its dialog will appear prompting you to specify the sorting priority. You also have the option of initializing and producing the Summary file. Once you have selected your options, click on the **OK** command button to send this report to the output device.

Note: In order to have accurate results, it is extremely important to update the Billing Database.

Table 13
Authorization Code Report

Acme Limited

Dallas, TX

Authorization Code Report

Extension: 204 - LEMMING, LUCY

Department: 754 OPS SUPPORT

Division:

Page: 2

Date: 05/18/95

Digits Dialed	Location	Date	Time	Duration	Cost	Route Used	Comments		
9 1 555 9707	DALLAS TX	10/04	11:45	3:00	0.92	DDD			
82 213 555 6500	DALLAS TX	10/04	12:26	3:18	0.62	WT2			
86 713 555 7504	HOUSTON TX	10/13	14:17	3:06	0.85	WT5	Ext. 209		
86 713 555 7504	HOUSTON TX	10/14	08:44	4:42	1.29	WT5	Ext. 209		
86 212 555 6599	NEW YORK NY	10/26	15:52	0:24	0.11	WT5			
86 212 555 7789	NEW YORK NY	10/26	15:52	0:12	0.05	WT5			
86 212 555 6599	NEW YORK NY	10/26	15:55	0:36	0.16	WT5			
9 1 313 555 6823	STAMFORD CT	10/27	09:18	17:00	9.24	DDD			
9 1 413 555 1877	ROYAL OAK MI	11/01	13:42	4:00	1.86	DDD			
9 1 413 555 1877	ROYAL OAK MI	11/04	14:18	7:00	3.25	DDD			
9 1 413 555 1877	ROYAL OAK MI	11/15	09:26	2:00	0.93	DDD			
86 604 555 7995	VANCOUVER BC	11/15	12:06	2:48	0.77	WT5			
Extension Totals:									
# Calls		Minutes		Min/Call		Cost		Cost/Call	
In	Out	In	Out	In	Out	In	Out	In	Out
ZONE 2	0 1	0:00	3:18	0:00	3:18	0.00	0.62	0.00	0.62
ZONE 3	0 0	0:00	0:00	0:00	0:00	0.00	0.00	0.00	0.00
ZONE 6	0 6	0:00	11:48	0:00	1:58	0.00	3.23	0.00	0.54
DDD	0 5	0:00	33:00	0:00	6:36	0.00	16.20	0.00	3.24
TIE FX	0 0	0:00	0:00	0:00	0:00	0.00	0.00	0.00	0.00
Total:	0 12	0:00	48:06	0:00	4:01	0.00	20.05	0.00	1.67

Reviewed By: _____

Approved By: _____

Trunk Analysis reports

The following reports list information for your telephone system's trunks. To access this list of reports, select **Trunk Analysis** from the Reports drop-down menu. Select the appropriate report from the Trunk Analysis cascading menu.

Schedule: If you wish to schedule each of these reports to run at a specific date and time, click on the **Schedule** command button from their respective report setup dialogs. This will invoke the MAT Common Services Scheduler application in which you can select the date and time for later reporting. Scheduler will then generate the selected report at the predefined date and time.

Trunk Utilization Report

The Trunk Utilization Report provides a call usage summary by service facility and by trunk. Overall trunk totals are provided in a summary line at the bottom of the report.

To generate this report, select **Trunk Utilization** from the Trunk Analysis cascading menu. The Trunk Utilization Report dialog will appear containing the check box **Recalculate line usage for report**. Turn this check box on (X) if you wish to recalculate the line usage. This will initialize the Summary file. Click on the **OK** command button to send this report to the output device.

Table 14
Trunk Utilization Report

Acme Limited Dallas, TX Trunk Utilization Report Page: 1 Date: 05/18/95									
Facility	Trunk Number	Rounded Traffic				Exact Traffic			
		Total Calls		Total Minutes		Total Calls		Total Minutes	
		Out	In	Out	In	Out	In	Out	In
DDD	0007001	0	3	0:00	10:00	0	3	0:00	8:14
	0007002	0	5	0:00	11:00	0	5	0:00	9:10
	0009003	0	1	0:00	2:00	0	1	0:00	1:36
	0009005	1	0	16:00	0:00	1	0	15:08	0:00
	0009006	1	0	7:00	0:00	1	0	6:48	0:00
	0009007	3	0	13:00	0:00	3	0	11:10	0:00
	0009008	4	0	6:00	0:00	4	0	4:14	0:00
	0009009	4	0	53:00	0:00	4	0	50:14	0:00
	0009010	2	0	34:00	0:00	2	0	33:34	0:00
	0009011	7	0	44:00	0:00	7	0	39:14	0:00
	0010001	0	1	0:00	1:00	0	1	0:00	0:58
	Total	22	10	173:00	24:00	22	10	160:22	19:58

Trunk Detail Report

This report provides the details of all calls made on a specific trunk. It lists the calling extension, phone number called, location, date and time, duration, cost, and the route used. It also lists the total number of calls, total duration, and total cost.

To generate this report, select **Trunk Detail** from the Trunk Analysis cascading menu. The Trunk Detail Report dialog will appear with a **Recalculate line usage for report** check box. Turn this check box on (X) to initialize the Summary file. Click on the **OK** command button to send this report to the output device.

Table 15
Trunk Detail Report

Acme Limited Dallas, TX Trunk Detail Report										
Trunk: T0009011 - 555-7761										Page: 1
										Date: 05/18/95
Ext.	Digits Dialed		Location		Date	Time	Duration	Cost	Route Used	Comments
216	9	1 214 555-5777	DALLAS	TX	05/17	11:31	12:00	4.42	DDD	AFT LTD.
216	9	1 214 555-5111	DALLAS	TX	05/17	11:42	2:00	0.74	DDD	
216	9	1 214 555-5347	DALLAS	TX	05/17	11:46	1:00	0.39	DDD	
216	9	1 206 555-1000	SEATTLE	WA	05/17	11:47	15:00	8.45	DDD	
203	9	1 214 555-5108	DALLAS	TX	05/17	12:02	1:00	0.39	DDD	
203	9	1 214 555-5137	DALLAS	TX	05/17	12:03	1:00	0.39	DDD	
215	9	1 613 555-6411	HOUSTON	TX	05/17	12:03	12:00	3.17	DDD	
Report Totals:										
		# Calls		Minutes		Min/Call		Cost		Cost/Call
		In	Out	In	Out	In	Out	In	Out	In Out
DDD		0	7	0:00	44:00	0:00	6:17	0.00	17.95	0.00 2.56
Total:										
		0	7	0:00	44:00	0:00	6:17	0.00	17.95	0.00 2.56
Reviewed By: _____ Approved By: _____										

Trunk Graph

This report graphs the usage of one class of trunks for a given duration. It lists the total number of minutes of trunk usage during each half-hour duration, the total number of calls made, the average number of minutes per call, and the percentage of total capacity used.

To generate this graph, select Trunk Graph from the Trunk Analysis cascading menu. The system will display the prompt **Do you want to proceed with the selected report?**. Click on the **OK** command button to send the graph to the output device.

Table 16
Trunk Graph

Acme Limited Dallas, TX Trunk Graph Report						Page: 1 Date: 05/31/95
Trunk Group: DDD						
Time Period	Minutes	# Calls	Min/Call	Percent Of Capacity	0	16 32 48 64 80
05:00 05:29	0:00	0	0:00	0%		
05:30 05:59	0:00	0	0:00	0%		
06:00 06:29	0:00	0	0:00	0%		
06:30 06:59	0:00	0	0:00	0%		
07:00 07:29	0:00	0	0:00	0%		
07:30 07:59	0:00	0	0:00	0%		
08:00 08:29	0:00	0	0:00	0%		
08:30 08:59	0:00	0	0:00	0%		
09:00 09:29	0:00	0	0:00	0%		
09:30 09:59	0:00	0	0:00	0%		
10:00 10:29	0:00	0	0:00	0%		
10:30 10:59	3:00	1	3:00	2%	*	
11:00 11:29	30:00	0	0:00	20%	*****	
11:30 11:59	114:46	7	16:24	77%	*****	
12:00 12:29	59:32	0	0:00	40%	*****	
12:30 12:59	0:00	0	0:00	0%		
13:00 13:29	0:00	0	0:00	0%		
13:30 13:59	0:00	0	0:00	0%		
14:00 14:29	0:00	0	0:00	0%		
14:30 14:59	0:00	0	0:00	0%		
15:00 15:29	0:00	0	0:00	0%		
15:30 15:59	0:00	0	0:00	0%		
16:00 16:29	0:00	0	0:00	0%		
16:30 16:59	0:00	0	0:00	0%		
17:00 17:29	0:00	0	0:00	0%		
17:30 17:59	0:00	0	0:00	0%		
18:00 18:29	0:00	0	0:00	0%		
18:30 18:59	0:00	0	0:00	0%		
19:00 19:29	0:00	0	0:00	0%		
19:30 19:59	0:00	0	0:00	0%		
Number of Trunks: 5						
Number of Days: .5						
Total Minutes Used: 207:18						
Total Calls Made: 8						
Total Time Available: 7200:00						

Tandem Tie Report

The Tandem Tie Report studies traffic in a tie line configuration. This report analyzes traffic which has come in from another location in the tie line network, passed through the central node, and then has gone out onto another tie line.

To generate this report, select **Tandem Tie** from the Trunk Analysis cascading menu. The Tandem Tie Report will appear containing the check box **Recalculate line usage for report**. Turn this check box on (X) to initialize the Summary file. Click on the **OK** command button to send the report to the output device.

Table 17
Tandem Tie Trunk Report

Acme Limited Dallas TX							
Tandem Tie Trunk Report							
Main Node (HUB): Dallas TX						Page: 1	
						Date: 06/11/95	
Source Node	Destination Node	Trunk Group In	Trunk Group Out	Cost In	Cost Out	Duration	# Calls
DALLAS, TX.	HOUSTON, TX.	TIEDA	TIEHO	0.00	3.00	90:00	3
MONTREAL, PQ.	NEW YORK, NY.	TIEDA	TIENY	0.00	3.00	90:00	3
SubTotal:				0.00	6.00	180:00	6
NEW YORK, NY.	HOUSTON, TX.	TIENY	TIEHO	0.00	2.00	60:00	2
NEW YORK, NY.	HOUSTON, TX.	TIENY	TIEHO	0.00	2.00	60:00	2
SubTotal:				0.00	4.00	120:00	4
HOUSTON, TX.	DALLAS, TX.	TIEHO	TIEDA	0.00	2.00	60:00	2
HOUSTON, TX.	NEW YORK, NY.	TIEHO	TIENY	0.00	2.00	60:00	2
SubTotal:				0.00	4.00	120:00	4
Total:				0.00	14.00	420:00	14

Directory/Configuration reports

The following reports list information on your Call Accounting directories and Telephone Configuration Database. This includes a diagnostic for your Configuration File. To access these reports, select **Directory/Configuration** from the Reports drop-down menu and select the desired report from its cascading menu.

Schedule: If you wish to schedule each of these reports to run at a specific date and time, click on the **Schedule** command button from their respective report setup dialogs. This will invoke the MAT Common Services Scheduler application in which you can select the date and time for later reporting. Scheduler will then generate the selected report at the predefined date and time.

Billing Database Report

When you sort the Billing Database Report by division, the system sorts the employee names within each department. A blank line is printed when there is a change in the first letter of the surnames or the first character in the department. Each division begins a new page.

To generate this report, select **Billing Database** from the Directory/Configuration cascading menu. The Billing Database Report dialog will appear containing a list box with three sort options: **Alphabetic**, **Extension**, and **Division**. It also includes the **Display Auth. Code** check box. Select a sort order by clicking on the appropriate name and click on the **OK** command button.

Table 18
Billing Database Report

Acme Limited (Alphabetic Listing) Billing Database Report Page: 1 Date: 05/18/85				
EMPLOYEE	DIVISION	DEPARTMENT	EXT.	EQUIPMENT
ACCOUNTING, FACSIMILE		620 CUSTOMER ACCTS	302	
AUBU, JEAN-CLAUDE		755 POSTAGE BY PHONE	274	
BARNES, CLIFF		620 CUSTOMER ACCTS	365	
BARRETT, SUSAN		711 EMPLOYEE RELTNS	282	
CLARK, JOHN		500 CUSTOMER SERVICE	413	
CLARKSON, BETTY		754 OPS SUPPORT	430	
HALL, ROSE		731 MAILING & GRPHCS	257	
JOHNSTONE, BOB		754 OPS SUPPORT	332	
JONES, MIKE		424 TRNG & DVLPMNT	398	
MAIL ROOM		731 MAILING & GRPHCS	256	
MANCUSO, ELLEN		754 OPS SUPPORT	455	
MCNICOLL, NANCY		620 CUSTOMER ACCTS	360	
RECEPTION		420 MAILING SYSTEMS	389	
SMITH, PETER		754 OPS SUPPORT	325	
SWITCHBOARD		500 CUSTOMER SERVICE	1	
SZABO, ANTON		753 CLIENT SERVICES	212	
TANNER, CHUCK		9273 S.TIPPIN PERS	9273	
THAMES, RENE		712 COMP & BENEFITS	280	

Customer Directory Report

This report lists the information in the Customer Directory. To generate this report, select **Customer Directory** from the Directory/Configuration cascading menu. The Customer Directory Report dialog will appear containing the Sort Order option button box from which you can select the sort order for the report. Your sorting order options are **Alphabetic by Name** or **Account Code**. The Account Code sort order is important in determining the client name for Account Code Summary billing.

Note: The system prints a blank line when there is a change in the first letter of the customer names.

Once you have selected the sort order, you can run the report and send it to your output device by clicking on the **OK** command button.

Table 19
Customer Directory Report

Acme Ltd. Dallas, TX Customer Summary Report (Alphabetic Listing) Page: 1 Date: 11/21/95			
Customer Name	Comments	Phone #	Account Code
Brady Andrews	Sales Office	555-1234	
Houston Office	Branch	(713) 455-1111	
Joe Grange	Supplier	555-3333	1
NY Office	Branch	(212) 555-1111	
NY Office 2	Branch	(212) 555-0000	
OLKE Ltd.	Reseller	555-9999	
Ollaf & Taft	Reseller	555-0000	
Quince/Powell		(713) 455-0000	
Smith/Lowe	Supplier	555-1234	1

Configuration Diagnostic Report

The Configuration Diagnostic Report lists your configuration which you can use to perform a diagnostic check of your Telephone Configuration Database.

To generate this report, select **Configuration Diagnostic** from the Directory/Configuration cascading menu. The dialog will appear containing two check boxes. Turn on (X) the **Print Configuration File Contents** check box to print out the contents of the entire Configuration file. Turn on (X) the **Print Diagnostic Report** check box to print out a diagnostic check. This diagnostic highlights errors in your Telephone Configuration Database. You should print this diagnostic periodically.

A typical message that appears in the diagnostic portion of the report will be **WARNING**. Warnings inform you that something in the configuration is valid but unusual. A warning message is issued to draw attention to this unusual entry to help confirm that this is what is intended. If you are sure you want this value to remain in the Configuration File, then ignore the warning.

Another typical message that appears in the diagnostic portion of the report will be **ERROR**. Error messages suggest that there are definite problems in the Configuration file. Eliminate all errors from the configuration, otherwise unexpected results may occur when operating Call Accounting.

Frequency reports

The following set of reports provide information on the frequencies of calls. They provide details and summaries on calls based on calling line ID, ring time, call duration, hold time (if supported), or unanswered calls. To access these reports, select **Frequency** from the Reports drop-down menu and select the appropriate report from its cascading menu.

Schedule: If you wish to schedule each of these reports to run at a specific date and time, click on the **Schedule** command button from their respective report setup dialogs. This will invoke the MAT Common Services Scheduler application in which you can select the date and time for later reporting. Scheduler will then generate the selected report at the predefined date and time.

Customer Summary Report

The Customer Summary Report lists calls which are made to customers listed in the Customer Directory whose phone numbers match the digits dialed in the CDR records.

To generate this report, select **Customer Summary** from the Frequency cascading menu. If you wish to recalculate the line usage for the report, turn on (X) the **Recalculate line usage for report** check box. Click on the **OK** command button to send the report to the output device.

Table 20
 Customer Summary Report

Acme Ltd. Dallas, TX Customer Summary Report					
Page: 1 Date: 11/21/95					
Customer Name	Number	Location	Calls	Duration	Cost
Brady Andrews	555-1234	Sales Office	2	3:00	0.00
Houston Office	(713) 455-1111	Branch	1	4:00	1.00
Joe Grange	555-3333	Supplier	1	1:00	0.00
NY Office	(212) 555-1111	Branch	0	0:00	0.00
NY Office 2	(212) 555-0000	Branch	0	0:00	0.00
OLKE Ltd.	555-9999	Reseller	6	10:00	0.00
Ollaf & Taft	555-0000	Reseller	5	25:30	0.00
Quince/Powell	(713) 455-0000		5	12:00	8.00
Smith/Lowe	5551234	Supplier	0	0:00	0.00
Report Totals:			20	55:30	9.00
Reviewed By: _____ Approved By: _____					

Frequently Called Numbers Report

The Frequently Called Numbers Report sorts the digits dialed of call records by frequency. Therefore, the most frequently called number will appear first followed by the less frequently called numbers.

To generate this report, select **Frequently Called Numbers** from the Frequency cascading menu. A dialog will appear containing the various field ranges for your report. The following is a description of the options to be defined before generating this report.

Digits Dialed Length: This defines the total digit length of the numbers to be considered for searching. For example, if you enter a range of 7 to 13, the program will only consider all the dialed numbers with a digit length ranging from 7 to 13.

Number of Significant Digits: This defines the number of digits to be considered for searching. Select from the drop-down list box whether to count these digits from the right or from the left.

Report Range - Frequency: This defines the frequency of calls made to a number before that number is considered for report generation. A range of frequencies can also be defined in this field.

Cost Calls: This check box provides the option to print the cost of the call or to suppress it. Turn this off (blank field) to make the reports run faster if you do not require costs or routes.

Sort output by: This list box provides different sort criteria. Select the method by which you would like to sort this report by Frequency, Digits, Duration, or Cost.

Initialize summary file: Turn this check box on (X) to initialize the Summary file for summary reports.

Once you have selected the criteria and field ranges for this report, click on the **OK** command button to send it to the output device.

Table 21
Frequently Called Numbers Report

Acme Limited Dallas, TX								
Frequently Called Numbers Report								
Report Range : Frequency: [Lowest to 999999]							Page: 1	
Digits Dialed Length From: [7 to 24]							Date: 05/18/95	
Significant Digits: 10 from the Right								
Frequency	Percentage	Digit Pattern	Actual Digits	Location		Duration	Cost	Comments
2	9.09	2145551234	9 1 214 555 1234	DALLAS	TX	2:00	0.78	
2	9.09	2145554321	9 1 214 555 4321	DALLAS	TX	2:00	0.78	
1	4.55	2125555692	9 1 212 852 5692	NEW YORK	NY	45:00	23.29	TTL INC.
1	4.55	2145551111	9 1 214 555 1111	DALLAS	TX	12:00	3.17	
1	4.55	2145552222	9 1 214 555 2222	DALLAS	TX	2:00	0.74	
1	4.55	2145553333	9 1 214 555 3333	DALLAS	TX	1:00	0.39	
1	4.55	2145554444	9 1 214 555 4444	DALLAS	TX	1:00	0.39	
1	4.55	2145555555	9 1 214 555 5555	DALLAS	TX	1:00	0.39	
1	4.55	2145556666	9 1 214 555 6666	DALLAS	TX	2:00	0.74	
1	4.55	2145557777	9 1 214 555 7777	DALLAS	TX	7:00	2.58	
1	4.55	2145558888	9 1 214 555 8888	DALLAS	TX	4:00	1.47	
1	4.55	2145559999	9 1 214 555 9999	DALLAS	TX	1:00	0.39	
1	4.55	2145550000	9 1 214 555 0000	DALLAS	TX	12:00	4.42	AFT LTD.
1	4.55	2145551222	9 1 214 555 1222	DALLAS	TX	2:00	0.74	
1	4.55	2085554005	9 1 208 973 4005	BOISE	ID	2:00	1.13	
1	4.55	2085551000	9 1 208 460 1000	BOISE	ID	15:00	8.45	
1	4.55	2065557134	9 1 206 555 7134	SEATTLE	WA	3:00	1.69	
1	4.55	3125550211	9 1 312 555 0211	CHICAGO	IL	33:00	18.60	
1	4.55	3125552242	9 1 312 555 2242	CHICAGO	IL	10:00	5.64	
1	4.55	3125552837	9 1 312 555 2837	CHICAGO	IL	16:00	9.02	
Report Totals:								
Patterns	% of Total Patterns		Total Duration			Total Cost		
22/22	100.00		173:00			84.78		
Reviewed By: _____ Approved By: _____								

Digits Detail Report

The Digits Detail Report lists the call details for frequently called numbers based on digits dialed.

To generate this report, select **Digits Detail** from the Frequency cascading menu. A dialog will appear prompting you for the range of digits for this report.

Digits Dialed Length: This defines the total digit length of the numbers to be considered for searching. For example, if you enter a range of 7 to 13, the program will only consider all the dialed numbers with a digit length ranging from 7 to 13.

Number of Significant Digits: This defines the number of digits to be considered for searching. You can select (from the drop-down list box) whether to count these digits from the right or from the left.

Report Range - Frequency: This defines the frequency of calls made to a telephone number before that number is considered for report generation. For example, if you enter a range from 100 to 999999, the report will list calls which were made more than 100 times to a specific telephone number in a defined time period.

Initialize summary file: Turn this check box on (X) to initialize the Summary file for summary reports.

Once you have selected the criteria and field ranges for this report, click on the **OK** command button to send it to the output device.

Table 22
Digits Detail Report

Acme Limited Dallas, TX Digits Detail Report											
Digits: 3525979											
Page: 1 Date: 05/18/95											
Ext.	Digits Dialed				Location	Date	Time	Duration	Cost	Route Used	Comments
5	9	1	404	352 5979	ATLANTA GA	04/11	05:57	6:00	1.49	DDD	
Report Totals:											
		# Calls		Minutes		Min/Call		Cost		Cost/Call	
		In	Out	In	Out	In	Out	In	Out	In	Out
DDD		0	1	0:00	6:00	0:00	6:00	0.00	1.49	0.00	1.49
TIE/MON		0	0	0:00	0:00	0:00	0:00	0.00	0.00	0.00	0.00
TIE/TOR		0	0	0:00	0:00	0:00	0:00	0.00	0.00	0.00	0.00
LOCAL		0	0	0:00	0:00	0:00	0:00	0.00	0.00	0.00	0.00
Total:		0	1	0:00	6:00	0:00	6:00	0.00	1.49	0.00	1.49
Tax included in costs:											
PST		:	0.10								
GST		:	0.09								
Reviewed By: _____ Approved By: _____											

Calling Line Frequency Report

This report lists information for incoming calls based on the calling line ID (CLID) or automatic numbering identification (ANI). This report only applies to systems that use this feature.

To generate this report, select **Calling Line Frequency** from the Frequency drop-down menu. A dialog will appear prompting you to enter the report range and sort order.

Report Range - Frequency: This defines the frequency of calls made to a number before that number is considered for report generation. A range of frequencies can also be defined in this field.

Cost Calls: This check box provides the option to print the cost of the call or to suppress it. Turn this off (blank field) to make the reports run faster if you do not require costs or routes.

Sort output by: This list box provides different sort criteria. Select the method by which you would like to sort this report by Frequency, Digits, Duration, or Cost.

Once you have entered the criteria for this report, click on the **OK** command button to send it to the output device.

Table 23
Calling Line Frequency Report

Acme Limited						
Dallas, TX						
Calling Line Frequency Report						
Report Range - Frequency: [Lowest to 999999]					Page: 1	
					Date: 05/18/95	

Calling #	Location		Customer Name	# Calls	Duration	Cost

713555656	HOUSTON	TX	ABC OIL LTD.	1	32:00	16.44
3135557878	BOISE	ID	YYY ELEC. INTL	1	15:00	7.70

Report Totals:				2	47:00	24.14

Reviewed By: _____ Approved By: _____						

Calling Line Summary Report

This report lists a summary of the calling numbers by area code or exchange and will provide a better indication of the geographical distribution of incoming calls.

To generate this report, select **Calling Line Summary** from the Frequency cascading menu. A dialog will appear with the prompt **Do you want to proceed with the selected report?**. Click on the **Yes** command button to send this report to the output device.

Table 24
Calling Line Summary Report

Acme Limited					
Dallas, TX					
Calling Line Summary Report					
Page: 1					
Date: 05/18/95					
Dial Code	Location		# Calls	Duration	Cost
613555	HOUSTON	TX	3	32:00	16.80
313555	BOISE	ID	1	15:00	7.70
212555	NEW YORK	NY	1	15:00	7.70
212555	NEW YORK	NY	1	15:00	7.70
212555	NEW YORK	NY	1	2:00	1.44
813555	TAMPA	FL	4	2:00	1.44
813555	TAMPA	FL	1	3:00	2.14
613555	HOUSTON	TX	1	11:00	16.00
613555	HOUSTON	TX	2	31:00	26.08
			15	126:00	87.00
Reviewed By: _____ Approved By: _____					

Ring Time Summary Report

The Ring Time Summary Report provides a distribution of ring time duration (length of time for a call to be answered) sorted by different time frames. This will help indicate how quickly calls are being answered.

Note: In order for the ring time duration's information to be output by the switch, the Time to Answer feature (TTA), which was introduced in Release 18 Group H, must be enabled.

To generate this report, select **Ring Time Summary** from the Frequency cascading menu. At the prompt: **Do you want to proceed with the selected report?**, click on the **OK** command button to send the report to the output device.

Table 25
Ring Time Summary Report (1 of 3)

Acme Limited													
Dallas, TX													
Ring Time Summary Report													
Abandoned Calls													
Page: 1													
Date: 05/18/95													

Time	#	Calls	(%)										
Period				0	1	2	3	4	5				

0:00 - 0:05	0	0.00											
0:06 - 0:10	1	20.00		*****									
0:11 - 0:15	0	0.00											
0:16 - 0:20	2	40.00		*****									
0:21 - 0:30	1	20.00		*****									
0:31 - 0:40	1	20.00		*****									
0:41 - 0:50	0	0.00											
0:51 - 1:00	0	0.00											
1:01 - 1:30	0	0.00											
1:31 - 2:00	0	0.00											
2:01 - 2:30	0	0.00											
2:31 - 3:00	0	0.00											
3:01 - 4:00	0	0.00											
4:01 - 5:00	0	0.00											
5:01 - >>>>	0	0.00											

Totals:	5												

Table 26
Ring Time Summary Report (2 of 3)

Acme Limited									
Dallas, TX									
Ring Time Summary Report									
Incoming Calls									
								Page: 2	
								Date: 05/18/95	
Time	# Calls	(%)							
Period			0	1	2	3	4	5	

0:00 - 0:05	0	0.00							
0:06 - 0:10	0	0.00							
0:11 - 0:15	0	0.00							
0:16 - 0:20	0	0.00							
0:21 - 0:30	0	0.00							
0:31 - 0:40	0	0.00							
0:41 - 0:50	1	100.00		*****					
0:51 - 1:00	0	0.00							
1:01 - 1:30	0	0.00							
1:31 - 2:00	0	0.00							
2:01 - 2:30	0	0.00							
2:31 - 3:00	0	0.00							
3:01 - 4:00	0	0.00							
4:01 - 5:00	0	0.00							
5:01 - >>>>	0	0.00							

Totals:	1								

Table 27
Ring Time Summary Report (3 of 3)

Acme Limited Dallas, TX Ring Time Summary Report Page: 3 Date: 05/18/95										
Time Period	# Calls	# Calls Unanswered	Average Time To Answer (s)	Maximum Answer Time	0	Average Time to Answer (Secs)				
						10	20	29	39	49
00:00 00:29	0	0	0.00	0						
00:30 00:59	0	0	0.00	0						
01:00 01:29	0	0	0.00	0						
01:30 01:59	0	0	0.00	0						
02:00 02:29	0	0	0.00	0						
02:30 02:59	0	0	0.00	0						
03:00 03:29	0	0	0.00	0						
03:30 03:59	0	0	0.00	0						
04:00 04:29	0	0	0.00	0						
04:30 04:59	1	0	45.00	45		*****				
05:00 05:29	1	1	0.00	0						
05:30 05:59	1	1	0.00	0						
06:00 06:29	0	0	0.00	0						
06:30 06:59	0	0	0.00	0						
07:00 07:29	0	0	0.00	0						
07:30 07:59	0	0	0.00	0						
08:00 08:29	0	0	0.00	0						
08:30 08:59	0	0	0.00	0						
09:00 09:29	1	1	0.00	0						
09:30 09:59	1	1	0.00	0						
10:00 10:30	1	1	0.00	0						
Totals:	6	5								

Call Duration Summary Report

The Call Duration Summary Report lists a summary for the duration of calls and provides a graphical summary on them. The calls are listed by different duration categories.

To generate this report, select **Call Duration Summary** from the Frequency cascading menu. At the prompt: **Do you want to proceed with the selected report?**, click on the **OK** command button to send this report to the output device.

Table 28
 Call Duration Summary Report (1 of 2)

Acme Limited Dallas, TX Call Duration Summary Report Outgoing Calls Page: 1 Date: 05/18/95									
Time	# Calls	(%)	0	2	4	6	8	10	
Period									
0:00 - 0:15	0	0.00							
0:16 - 0:30	0	0.00							
0:31 - 0:45	0	0.00							
0:46 - 1:00	0	0.00							
1:01 - 1:30	0	0.00							
1:31 - 2:00	0	0.00							
2:01 - 3:00	0	0.00							
3:01 - 5:00	0	0.00							
5:01 - 10:00	6	66.67	*****						
10:01 - 15:00	2	22.22	*****						
15:01 - 20:00	1	11.11	*****						
20:01 - 25:00	0	0.00							
25:01 - 30:00	0	0.00							
30:01 - 60:00	0	0.00							
60:01 - >>>>	0	0.00							
Totals:	9								

Table 29
Call Duration Summary Report (2 of 2)

Acme Limited Dallas, TX Call Duration Summary Report Incoming Calls Page: 2 Date: 05/18/95									
Time	#	Calls	(%)	0	1	2	3	4	5
Period									
0:00 - 0:15	2	33.33	*****						
0:16 - 0:30	0	0.00							
0:31 - 0:45	0	0.00							
0:46 - 1:00	0	0.00							
1:01 - 1:30	0	0.00							
1:31 - 2:00	0	0.00							
2:01 - 3:00	0	0.00							
3:01 - 5:00	0	0.00							
5:01 - 10:00	1	16.67	*****						
10:01 - 15:00	1	16.67	*****						
15:01 - 20:00	1	16.67	*****						
20:01 - 25:00	1	16.67	*****						
25:01 - 30:00	0	0.00							
30:01 - 60:00	0	0.00							
60:01 - >>>>	0	0.00							
Totals:	6								

Hold Time Detail Report

The Hold Time Detail Report lists call information based on the length of time a call was on hold. Use this report to provide details of any unusually long calls appearing on the Hold Time Summary Report.

To generate this report, select **Hold Time Detail** from the Frequency cascading menu. From the Hold Time Detail dialog, enter the minimum hold time in seconds for the records to be listed on this report. Click on the **OK** command button to send this report to the output device.

Table 30
 Hold Time Detail Report

Acme Limited Dallas, TX Hold Time Detail Report					Page: 1 Date: 05/18/95
Minimum hold time: 0					
Extension	Date	Time	Digits	Hold Time	
1	04/11	00:39	914165551080	0:33	
1	04/11	00:39	95553318	0:44	
10	04/11	04:08	Incoming	0:10	
10	04/11	04:08	Incoming	0:07	
2	04/11	04:59	Incoming	0:10	
2	04/11	04:59	Incoming	0:44	
7	04/11	05:16	95559791	0:10	
7	04/11	05:38	95559792	0:33	
5	04/11	05:57	914095555556	0:10	
Totals:				9	3:21

Hold Time Summary Report

If your system supports hold time information, then use this report to list a summary of the hold time information based on duration time frames. It provides a graphical summary of any calls that were put on hold.

To generate this report, select **Hold Time Summary** from the Frequency cascading menu. At the prompt: **Do you want to proceed with the selected report?**, click on the **OK** command button to send the report to the output device.

Table 31
Hold Time Summary Report (1 of 2)

Acme Limited Dallas, TX Hold Time Summary Report Outgoing Calls									
								Page: 1	
								Date: 05/18/95	
Time	#	Calls	(%)						
Period				0	1	2	3	4	5
0:00 - 0:05	0	0.00							
0:06 - 0:10	2	40.00	*****						
0:11 - 0:15	0	0.00							
0:16 - 0:20	0	0.00							
0:21 - 0:30	0	0.00							
0:31 - 0:40	2	40.00	*****						
0:41 - 0:50	1	20.00	*****						
0:51 - 1:00	0	0.00							
1:01 - 2:00	0	0.00							
2:01 - 3:00	0	0.00							
3:01 - 4:00	0	0.00							
4:01 - 5:00	0	0.00							
5:01 - 10:00	0	0.00							
10:01 - 20:00	0	0.00							
20:01 - >>>>	0	0.00							
Totals:	5								

Table 32
Hold Time Summary Report (2 of 2)

Acme Limited									
Dallas, TX									
Hold Time Summary Report									
Incoming Calls									
								Page: 2	
								Date: 05/18/95	
Time	# Calls	(%)	0	1	2	3	4	5	
Period									
0:00 - 0:05	0	0.00							
0:06 - 0:10	3	75.00	*****						
0:11 - 0:15	0	0.00							
0:16 - 0:20	0	0.00							
0:21 - 0:30	0	0.00							
0:31 - 0:40	0	0.00							
0:41 - 0:50	1	25.00	*****						
0:51 - 1:00	0	0.00							
1:01 - 2:00	0	0.00							
2:01 - 3:00	0	0.00							
3:01 - 4:00	0	0.00							
4:01 - 5:00	0	0.00							
5:01 - 10:00	0	0.00							
10:01 - 20:00	0	0.00							
20:01 - >>>>	0	0.00							
Totals:	4								

Unanswered Call Detail Report

If the switch outputs an incoming call with a duration of zero and a ring time greater than zero, then it will be recognized as an unanswered call. The Unanswered Call Detail Report lists the date, time, and trunk of all unanswered calls. To generate this report, select **Unanswered Call Detail** from the Frequency cascading menu. At the prompt: **Do you want to proceed with the selected report?**, click on the **OK** command button to send it to the output device.

Table 33
Unanswered Call Detail Report

Acme Limited Dallas, TX Unanswered Call Detail Report			Page: 1 Date: 05/18/95
Date	Time	Trunk	
04/11	05:29	0002	
04/11	05:38	0004	
04/11	09:00	0001	
04/11	09:30	0001	
04/11	10:00	0001	
04/11	10:00	0001	
04/11	10:00	0001	
04/11	10:00	0001	
04/11	10:00	0001	
04/11	10:00	0001	
04/11	10:00	0001	
04/11	10:00	0001	
Totals:	12		

Unanswered Call Summary Report

If the switch outputs an incoming call with a duration of zero and a ring time greater than zero, then it will be recognized as an unanswered call. The Unanswered Call Summary Report provides a graphical display of the number of unanswered calls during a specific time period.

To generate this report, select **Unanswered Call Summary** from the Frequency cascading menu. At the prompt: **Do you want to proceed with the selected report?**, click on the **OK** command button to send it to the output device.

Table 34
 Unanswered Call Summary Report

Acme Limited Dallas, TX Unanswered Call Summary Report Page: 1 Date: 05/18/95									
Time	#	Calls	(%)						
Period				0	1	2	3	4	5
05:00 05:29	1	20.00	*****						
05:30 05:59	1	20.00	*****						
06:00 06:29	0	0.00							
06:30 06:59	0	0.00							
07:00 07:29	0	0.00							
07:30 07:59	0	0.00							
08:00 08:29	0	0.00							
08:30 08:59	0	0.00							
09:00 09:29	1	20.00	*****						
09:30 09:59	1	20.00	*****						
10:00 10:29	1	20.00	*****						
10:30 10:59	0	0.00							
11:00 11:29	0	0.00							
11:30 11:59	0	0.00							
12:00 12:29	0	0.00							
12:30 12:59	0	0.00							
13:00 13:29	0	0.00							
13:30 13:59	0	0.00							
14:00 14:29	0	0.00							
14:30-14:59	0	0.00							
15:00 15:29	0	0.00							
15:30 15:59	0	0.00							
16:00 16:29	0	0.00							
16:30 16:59	0	0.00							
17:00 17:29	0	0.00							
17:30-17:59	0	0.00							
Totals:	5								

Location Summary Report

The Location Summary Report prints out call volumes and costs to calling locations.

To generate this report, select **Location Summary** from the Frequency cascading menu. At the **Recalculate line usage for report?** check box, click on it to recalculate the line usage. Click on the **OK** command button to send it to the output device.

Table 35
Location Summary Report

Acme Limited							
Dallas, TX							
Location Summary Report							
Page: 1							
Date: 05/18/95							

Location	Calls		Duration		Cost		
	In	Out	In	Out	In	Out	

PLEASANTVLNJ	0	1	0:00	11:00	0.00		6.24
NEW YORK NY	0	1	0:00	28:00	0.00		15.88
MONTREAL PQ	0	2	0:00	78:00	0.00		32.55
SEATTLE WA	1	0	15:00	0:00	7.70		0.00
DALLAS TX	0	1	0:00	17:00	0.00		4.00
BOISE ID	1	0	32:00	0:00	16.44		0.00
DEL REY CA	0	1	0:00	30:00	0.00		17.98

Totals:	2	6	47:00	164:00	24.14		76.64

Area Code Summary Report

The Area Code Summary Report prints out call volumes and costs to calling locations.

To generate this report, select **Area Code Summary** from the Frequency cascading menu. At the **Recalculate line usage for report?** check box, click on it to recalculate the line usage. Click on the **OK** command button to send it to the output device.

Table 36
Area Code Summary Report

Acme Limited Dallas, TX Area Code Summary Report							Page: 1 Date: 05/18/95
Area Code	Calls		Duration		Cost		
	In	Out	In	Out	In	Out	
214	1	4	6:00	59:00	0.00	27.24	
613	1	0	1:00	0:00	0.00	0.00	
212	1	0	2:00	0:00	0.00	0.00	
212	1	12	1:00	35:00	0.00	13.02	
212	0	3	0:00	20:00	0.00	11.27	
306	0	1	0:00	33:00	0.00	18.60	
212	0	2	0:00	26:00	0.00	14.65	
Totals:	4	22	10:00	173:00	0.00	84.78	

Export Report

This report generates a text format report onto disk so that other programs (e.g., database management systems) can be used to create reports.

To generate the Export Report, select **Export** from the Reports drop-down menu. This will display another cascading menu containing the components of the Export function.

Schedule: If you wish to schedule this report to run at a specific date and time, click on the **Schedule** command button from its report setup dialog. This will invoke the MAT Common Services Scheduler application in which you can select the date and time for later reporting. Scheduler will then generate the selected report at the predefined date and time.

Detail Definition

To define the components of the Export Detail Report, select **Detail Definition** from the Export cascading menu. This will display the Detail Definition dialog which allows you to enter the field ranges for this report. This dialog contains standard editing features which will assist you in defining these fields. Before you attempt to define the report fields, you should lay it out on paper first.

Figure 10
Detail Definition dialog

Detail Definition

Detail Definition File: REPLY1.DRL

Available Fields

- Last Name
- First Name
- Extension
- Department
- Division
- Equipment Cost
- Auth. Code (Billing Database)
- Customer Name
- Cust. Location
- Account Code (Customer Directory)

Selected Fields

Start	Length	Justification	Field Name
1	20	L	Department
21	20	L	Last Name
41	20	L	First Name

Buttons: Modify, Delete, Arrange, Sort, Select File, OK, Cancel, Help

To enter the field ranges, select the name from the Available Fields list box by highlighting it. For example, when you click on **Last Name**, an edit box will appear prompting you to enter the start position and its length, and to specify its justification. To complete the entry for each selected field, click on the **OK** command button.

To arrange the fields in a specific order, enter the amounts accordingly. For example, if you wish to list the Department, Last Name, and First Name, then select **Department** by highlighting it. When its edit box appears, enter: **1** in the 'Start' field (in order for the system to print it at the first position), **20** in the 'Length' field and **Left** justify it. Click on the **OK** command button to complete the edit. This information will appear in the Selected Fields list at the bottom of the Detail Definition dialog.

Next, select **Last Name** by highlighting it and assign **21** to its start position, **20** for the length, and **Left** justify it. Click on the **OK** command button to complete the edit. Finally, select **First Name** from the Available Fields list box by highlighting it and assign it values of **41** (Start), **20** (Length), and **Left** justify it. Click on the **OK** command button to complete the edit.

Note: When you are selecting your field ranges for this function, you should use the minimum field length for your fields. This will save on file size as you load the file.

Use the following editing features when editing the report's field ranges:

Modify: Click on **Modify** to edit the field range. Click on the fields of that record to edit its information and type the new text over the old. To save this information and then exit this dialog, click on the **OK** command button.

Delete: To delete a record from the database grid, click on the record row header to highlight it and click on **Delete**. A dialog will appear prompting you for verification. Click on the **Yes** command button to delete this field range.

Arrange: Once you click on this command button, the system will automatically arrange the starting position of the selected fields according to the numeric order.

Sort: Use the Sort command to sort the records in the database according to numerical order. Once you click on this command button, the system will automatically sort the field ranges.

Select File: To select a different Detail Definition file, click on this command button. A dialog will appear prompting you to enter the directory and filename of the detail definition file. Click on the **OK** command button to select it and exit to the Detail Definition dialog.

Export Detail Report

The Export Detail Report lists the extension detail information in chronological order as they are collected from the switch. This will list the calling information in the ranges that have been set up in the Detail Definition function. You should select **Disk** as your output device for this type of report.

If you wish to schedule this report to run at a specific date and time, click on the **Schedule** command button and enter its scheduling criteria.

To generate the Export Detail Report, select **Export Detail** from the Export cascading menu. A dialog will appear with the check box **Recalculate line usage for report?**. Click on this check box to recalculate the line usage. Click on the **OK** command button to send this report to the output device.

Note: It is possible to include Other Billable Items data in this report. Select this option from the Reporting Options dialog.

Graphs

When you select the Graphs function, the system will display a graph of its data. You can then edit the attributes of the graph and then save it as a bitmap file. You can also print a graph directly from the screen to the desired output. In addition, when you print a graph from the screen, you can reset the scaling and print layout of the graph.

To access this function, select **Graphs** from the Reports drop-down menu. This function allows you to select the display parameters of a graph. This dialog contains standard editing features such as Open, Save, and Save As. In addition, you can specify parameters for this graph by clicking on the **Filters** command button.

Enter the graph parameters in the following fields.

Figure 11
Graph editor

The screenshot shows a 'Graphs' dialog box with the following elements:

- Graph Type:** A dropdown menu currently showing '3D Bar Graph'.
- X-Axis:** A dropdown menu currently showing 'Extension'.
- Labels:** Three text input fields for 'Main Title:', 'X-Axis Title:', and 'Y-Axis Title:'.
- Data Sets:** A group box containing three radio buttons: 'Calls' (selected), 'Cost', and 'Duration'.
- Y1-Axis:** A dropdown menu showing 'Incoming Calls'.
- Y2-Axis:** A dropdown menu showing 'Outgoing Calls'.
- Y3-Axis:** A dropdown menu showing 'Total Calls'.
- Recalculate Summary File:** A checked checkbox.
- Buttons:** A vertical stack of buttons on the right: 'Open', 'Save', 'Save As', 'Filters', 'OK', 'Cancel', and 'Help'.

Graph Type: From the Graph Type drop-down list box, select the type of graph you wish to display. The following graph types are included:

- | | |
|------------|---------------|
| Pie Chart | 3D Pie Chart |
| Bar Graph | 3D Bar Graph |
| Line Graph | Area Graph |
| Tape Graph | 3D Area Graph |

X-Axis: Select the x-axis from this drop-down list box. The following x-axis options are included: Extension, Department, Division, Trunk, and Trunk Group.

Labels: These fields contain the titles which will appear on the graph. In these fields, type in the Main Title, the X-Axis Title, and the Y-Axis Title. You can enter up to 80 characters in each field.

Data Sets: Call Accounting allows you to select multiple y-axis elements to display different fields on the graph. In addition, you can select the legend of the graph by clicking on one of the following option buttons.

Calls: Select this option button to change the data set legends to report on calls made.

Cost: Select this option button to change the data set legends to report on the calls' costs.

Note: If you have selected Trunk or Trunk Group as your X-Axis, then you cannot select the Cost option.

Duration: Select this option button to change the data set legends to report on the calls' duration.

Y1/Y2/Y3-Axis: In these fields, select the graph's y values. From the field's drop-down list boxes select either **Outgoing**, **Incoming**, **Total**, or **None**.

Note: If a Pie Chart is selected as the graph type, then you must select two of the Y-Axis as None.

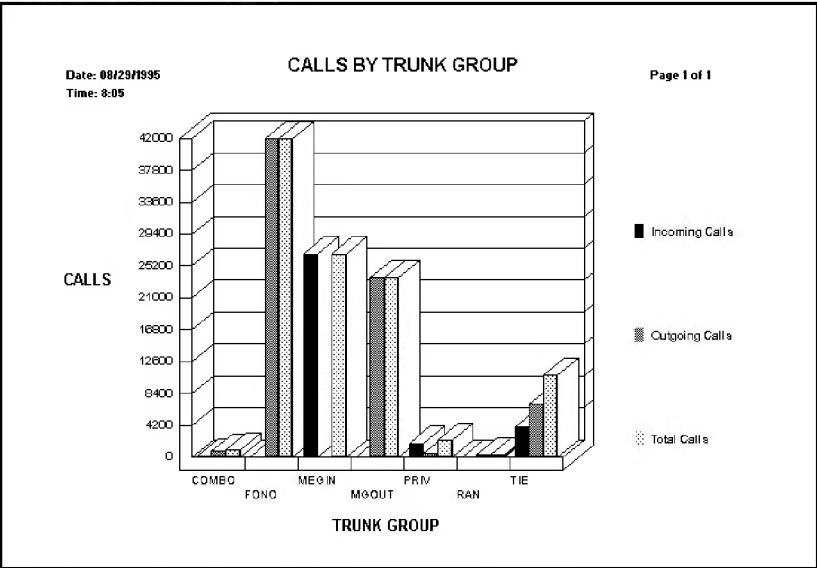
Recalculate Summary File: Turn this check box on (X) to recalculate the Summary file for the summary reports.

Filters: Click on this command button to access the Select Report Filters dialog. To select a filter, click on the command button for that filter. Another edit box will appear prompting you to enter its filter ranges. Enter the minimum and maximum values in the filter fields. These values are inclusive. To save the filter ranges and return to the previous dialog, click on the **OK** command button. To exclude this range from the graphs, click on the **Exclude** check box. When you run the graph, these filters will only include (or exclude) the data within the ranges you have set.

Once you have entered the graph's attributes, click on the **OK** command button to save them and return to the main window. Click on **Cancel** to exit from this function without saving any of these changes to the graph.

The following graph is an example of a 3D Bar Graph with display parameters and attributes of trunk group calls.

Figure 12
Sample 3D Bar Graph



To enter this information, perform the following steps.

- 1 Click on the Reports drop-down menu and click on **Graphs** from its cascading menu.
- 2 Select the graph type **3D Bar Graph** from the Graph Type drop-down list box.
- 3 Select the x-axis **Trunk Group** from the X-Axis drop-down list box.
- 4 In the Main Title field, enter: **Calls by Trunk Group**
- 5 In the X-Axis field, enter: **Trunk Group**
- 6 In the Y-Axis field, enter: **Calls**
- 7 Turn the Recalculate Summary File check box on (X).
- 8 Click on the **OK** command button from this dialog to save this information and display the graph.

To return to the main window, click on **Exit** from the File drop-down menu.

The Graphics Services module

The Graphics Services module provides graph generating functions for supported MAT modules. Use this module to edit the attributes of a graph which is generated from another MAT module, and then print it or save it as a bitmap file.

Accessing the Graphics Services module

When you generate a graph from Call Accounting, the Graphics Services module will automatically be invoked. Its main window will appear displaying the generated graph. You can then edit the graph's attributes or print it.

Once you have edited or printed the graph, you should then save it as a graph template. This template file contains the graph's attributes and data. Use the following commands to open and save the graph template files, and to edit and print the graphs.

Generating a Graph

To create a graph, the Graphics Services module will use a default template to generate the graph type and its x-axis and y-axis ranges. This graph will then be displayed on the Graphics Services module main window.

Graphics Services Commands

The Graphics Services module consists of a display window and a set of commands used to manage the graph template files. The following sections will describe these commands as they are accessed from the main window.

File Commands

Use the File commands to open and save the graph template files, save bitmap copies of the graphs, and print the graphs to the selected output device.

Open Template

The **Open Template** command allows you to open an existing template file which contains the data from an invoking MAT module. A template is an ASCII text file which contains the invoking module's data (i.e., x and y values) and attributes (i.e., graph type, titles, and scale).

Save Template

Use the **Save Template** command to save the current graph to a template file. This will save the graph's parameters to a file for later retrieval.

Save Template As

If you wish to save the current graph to a template filename other than its current name, click on **Save Template As** from the File drop-down menu. In the dialog which appears, enter the new filename for this template in the File Name field.

Save Graph As

The **Save Graph As** command allows you to save a bitmap image of the current graph to a bitmap file (extension .BMP) for use by other utilities. You can then open this graphics file using any graphics program which supports bitmap format files and edit or print it as desired. You can also import the bitmap file into any word processing or desktop publishing software.

Print

Use the **Print** command to print an image of the current graph to your printer.

Exit

Use the **Exit** command to exit from the Graphics Services module.

Copy to Clipboard

Use the **Copy to Clipboard** function to copy a bitmap image of the current graph to the Windows Clipboard program for use by another utility.

Options

The Graphics Services module allow you to select the display parameters of a graph.

Graph Options

The **Graph Options** function allows you to select the attributes for the current graph. This includes such features as: graph type, titles, and display ranges.

Show All

If you wish to view the whole graph, click on **Show All** from the Options drop-down menu. A check mark will appear next to the Show All toggle command, and the entire graph will appear on the main window. Click on Show All again to turn off the toggle and display the defined x-axis range.

Help

The Help menu provides access to MAT on-line help, using the standard Windows Help interface, which includes a list of Contents, a Search facility, and a tutorial on how to use Help.